

lower Lakes, but it was considerably more than average in Wisconsin and upper Michigan, where most of it came during two storms of the first week. In Ohio and Indiana and in Kansas and western Missouri the southern limit of the snowfall was unusually far to the north for April.

In the elevated portions of the Western States conditions varied greatly; but the snowfall was light in most mountain portions of Arizona and New Mexico and of many of the more northern States. On the other hand, the California, Nevada, and Utah mountain areas had much more than the normal amounts for April, especially the Sierra regions between 40° and 36° latitude. Here Glacier Point, Calif., recorded no less than 113 inches fall during the month.

The snow remaining at high levels at the end of April did not give promise of abundant stream flows next summer in Arizona and in most parts of the North

Pacific States. In California and Nevada the April falls considerably improved the prospects, yet they were mainly a little below average; the April snowfall did not pack well, and the late summer water supply is likely to be inadequate. In Utah, Idaho, and the Rocky Mountain States the prospects for stream flow were usually rather better than the average.

## RELATIVE HUMIDITY.

The distribution of the relative humidity, like the precipitation, varied greatly at near-by points, but on the whole the monthly averages were below normal from the middle Mississippi Valley eastward and northeastward to the Atlantic coast. Over other districts the averages were mainly above normal, with the greatest excesses in the southern portions of the Great Plains and Plateau regions, and locally in central California.

## SEVERE LOCAL STORMS, APRIL, 1923.

The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A more complete statement will appear in the Annual Report of the Chief of Bureau.]

Place.	Date.	Time.	Width of path (yards).	Loss of life.	Value of property destroyed.	Character of storm.	Remarks.	Authority.
Chappells, S. C.	4					Wind	School building wrecked.	Official, U. S. Weather Bureau.
Wake-Nash county line, N. C.	4	6 p. m.			\$100,000	Tornado	25 small buildings damaged or completely destroyed, also about 40 tobacco barns and out-houses; many large trees uprooted; 2 persons injured.	Do.
Cass County, Tex. (northeast part of).	4	P. m.	100		35,000	do	About 20 buildings wrecked.	Do.
Alexandria and Pineville, La.	4	6 p. m.		14	500,000	do	About 142 buildings damaged, and 60 persons injured; path 3 miles long and several hundred yards wide.	Times-Picayune (New Orleans, La.); Post (New York).
El Dorado, Ark., and vicinity.	4	5 p. m.				Wind and hail	Several farmhouses blown from foundations, 1 demolished; 1 man injured.	Southwestern American (Fort Smith, Ark.).
Yazoo City, Miss.	4	P. m.		2		Wind	No property damage reported.	Times-Picayune (New Orleans, La.).
District of Columbia and adjacent Maryland.	5	3 p. m.	200		100,000	Tornado	4 persons hurt; 7 houses in Silver Springs and Avenel demolished; many other houses and outbuildings damaged; hundreds of trees uprooted, broken, or torn; path 11 miles long.	Official, U. S. Weather Bureau.
Philadelphia, Pa., and adjacent districts.	5					Wind and rain	A score of houses partly wrecked in city; other serious damage in nearby counties.	Do.
Hunterdon County, N. J.	5					do	Thousands of dollars property damage.	Do.
New Castle County, Del.	5					Thunderstorm	Farmhouses, barns, telephone and telegraph poles damaged.	Do.
Magnolia Springs, Tex. (vicinity of).	6	8 p. m.			3,000	Wind	Crops and buildings damaged.	Do.
Rochester, N. Y., and nearby counties.	8	P. m.				Wind and rain	Heavy property damage; County Agricultural Society and farmers sustain heavy losses; big dining hall demolished.	Post Express (Rochester, N. Y.).
Meridian, La.	12	4:30 a. m.				Tornado	15 houses wrecked, 45 others damaged; 6 persons injured.	Item (New Orleans, La.); Shreveport Journal (La.).
Cullman, Ala.	12	P. m.				Wind	3 persons injured, several residences and barns blown down, and scores of animals killed; all wire services paralyzed.	Inquirer (Owensboro, Ky.).
Lafourche, La., and vicinity.	13	A. m.	200	2	100,000	Tornado	Many houses wrecked and 25 persons injured.	Times-Picayune (New Orleans, La.).
Anniston, Ala.	13	9:30 a. m.				Wind	Several houses and barns unroofed; trees uprooted and wires damaged.	Anniston Star.
Greenville, S. C.	13	4 p. m.			1,000	Tornado	Small dwellings destroyed.	Official, U. S. Weather Bureau.
Augusta, Ga.	13	P. m.				Wind and rain	Several stores damaged; trees, plate-glass windows, and wires suffer most from wind; car traffic held up.	Greenville News (S. C.).
Orange, Tex.	20	4 p. m.				Wind	Portion of roof of lumber shed blown off.	Official, U. S. Weather Bureau.
Central Illinois	21	A. m.				do	Considerable damage done to trees, residences, poles, wires, and outhouses.	Do.
Chicago, Ill.	21					do	Some property damage.	Do.
Ludington, Mich. (5 miles southeast of).	21	1 p. m.	200	1	1,000	do	High winds damage trees, buildings, etc.; path 5 to 10 miles long.	Do.
Randolph, Utah	22					do	Chimneys, haystacks, and some roofs damaged.	Do.
Donaldson, Tenn.	23	Noon				Thunderstorm	Schoolhouse damaged and about 30 children injured.	Do.
Barneston, Kans. (near).	23	P. m.		2		Tornado	1 home totally destroyed; path 4 miles long.	Wichita Eagle (Kans.).
Burkburnett, Tex. (vicinity of).	24	8-9 p. m.			25,000	do	5 residences and 6 oil derricks destroyed.	Official, U. S. Weather Bureau.
Henrietta, Tex. (vicinity of).	24	7:20-8:20 p. m.	1,760		200,000	Wind	Crops and buildings severely damaged; storm was accompanied by hail; path 15 miles long.	Do.
Syracuse, Kans. (2 miles southwest of).	27	2 p. m.		1		do	Teacher of school killed and 2 children injured.	Wichita Eagle (Kans.).
Mobile County, Ala.	27				5,400	do	Considerable property damaged; storm was accompanied by hail.	Official, U. S. Weather Bureau.
Dardanelle and Russellville, Ark. (country surrounding).	28				200,000-300,000	Wind and rain	Houses unroofed and crops damaged; 1,500 acres of cotton will have to be replanted; heavy hail accompanied storm.	Do.
Waltersville, Miss.	28					Wind	Damage principally to residences, telephone and trolley lines, and to an industrial plant.	Do.
Little Island Coast Guard Station, Va.	29	12:01 a. m.				Tornado	Station, 3 residences, and several outbuildings demolished; 600 yards of telegraph line blown down.	Do.